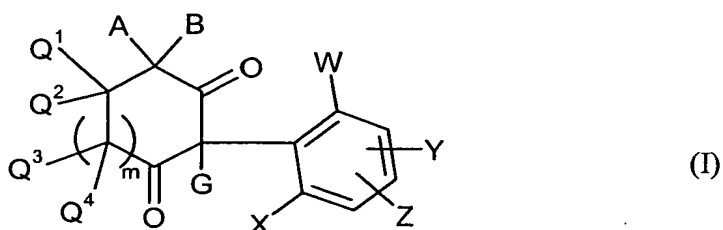


Patent claims

1. Compounds of the formula (I)



in which

W represents cyano, halogen, alkyl, alkenyl, alkynyl, alkoxy, haloalkyl or haloalkoxy,

X represents hydrogen, halogen, alkyl, alkoxy, haloalkyl, haloalkoxy or cyano,

Y represents hydrogen, halogen, alkyl, alkoxy, haloalkyl, haloalkoxy, cyano or optionally substituted phenyl,

Z represents hydrogen, halogen, alkyl, alkoxy, haloalkyl, haloalkoxy or cyano,

G represents halogen or nitro,

m represents the number 0 or 1,

A represents hydrogen, in each case optionally halogen-substituted alkyl, alkenyl, alkoxyalkyl, polyalkoxyalkyl, alkylthioalkyl, saturated or unsaturated, optionally substituted cycloalkyl in which optionally at least one ring atom is replaced by a heteroatom, or in each case

optionally halogen-, alkyl-, haloalkyl-, alkoxy-, haloalkoxy-, cyano- or nitro-substituted aryl, arylalkyl or hetaryl,

B represents hydrogen or alkyl,

5

A and B together with the carbon atom to which they are attached represent a saturated or unsaturated, unsubstituted or substituted cycle which optionally contains at least one heteroatom,

10

A and Q¹ together represent optionally substituted alkanediyl in which optionally two not directly adjacent carbon atoms form a further optionally substituted cycle,

15

Q¹ represents hydrogen, alkyl, alkoxyalkyl, optionally substituted cycloalkyl (in which optionally one methylene group is replaced by oxygen or sulphur) or in each case optionally substituted phenyl, hetaryl, phenylalkyl or hetarylalkyl,

20

Q², Q³, Q⁴ independently of one another represent hydrogen or alkyl,

Q¹ and Q² together with the carbon atom to which they are attached represent a saturated or unsaturated, unsubstituted or substituted cycle which optionally contains a heteroatom.

25

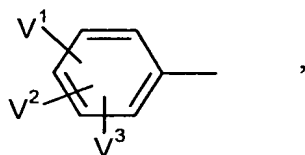
2. Compounds of the formula (I) according to Claim 1 in which

W represents halogen, C₁-C₆-alkyl, C₂-C₆-alkenyl, C₂-C₆-alkynyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy or cyano,

30

X represents hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy or cyano,

Y represents hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, cyano or represents the group



5

V¹ represents hydrogen, halogen, C₁-C₁₂-alkyl, C₁-C₆-alkoxy, C₁-C₆-alkylthio, C₁-C₆-alkylsulphinyl, C₁-C₆-alkylsulphonyl, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, nitro, cyano or represents phenyl, phenoxy, phenoxy-C₁-C₄-alkyl, phenyl-C₁-C₄-alkoxy, phenylthio-C₁-C₄-alkyl or phenyl-C₁-C₄-alkylthio, each of which is optionally mono- or polysubstituted by halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, nitro or cyano,

10

V² and V³ independently of one another represent hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl or C₁-C₄-haloalkoxy,

15

V¹ and V² together and together with the carbon atoms to which they are attached represent an optionally C₁-C₄-alkyl- or halogen-substituted 5- or 6-membered cycle in which optionally one or two carbon atoms may be replaced by oxygen, sulphur or nitrogen,

20

Z represents hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy or cyano,

25

G represents halogen or nitro,

m represents the number 0 or 1,

5 A represents hydrogen or in each case optionally halogen-substituted C₁-C₁₂-alkyl, C₃-C₈-alkenyl, C₁-C₆-alkoxy-C₁-C₄-alkyl, in each case optionally halogen-, C₁-C₄-alkyl- or C₁-C₄-alkoxy-substituted C₃-C₈-cycloalkyl or C₃-C₆-cycloalkyl-C₁-C₄-alkyl in which optionally one or two not directly adjacent ring members are replaced by oxygen and/or sulphur or represent in each case optionally halogen-, C₁-C₆-alkyl-, C₁-C₆-haloalkyl-, C₁-C₆-alkoxy-, C₁-C₆-haloalkoxy-, cyano- or nitro-substituted phenyl, benzyl, hetaryl having 5 or 6 ring atoms or
10 hetaryl-C₁-C₄-alkyl having 5 or 6 ring atoms,

B represents hydrogen or C₁-C₆-alkyl,

15 A, B and the carbon atom to which they are attached represent saturated C₃-C₁₀-cycloalkyl or unsaturated C₅-C₁₀-cycloalkyl in which optionally one ring member is replaced by oxygen or sulphur and which are optionally mono- or disubstituted by C₁-C₆-alkyl, C₃-C₈-cycloalkyl, C₁-C₆-haloalkyl, C₁-C₆-alkoxy, C₁-C₆-alkylthio, halogen or phenyl,

20

A and Q¹ together represent C₃-C₆-alkanediyl which is optionally mono- or disubstituted by identical or different substituents from the group consisting of C₁-C₄-alkyl and C₁-C₄-alkoxy,

25 Q¹ represents hydrogen, C₁-C₆-alkyl, C₁-C₆-alkoxy-C₁-C₂-alkyl, optionally fluorine-, chlorine-, C₁-C₄-alkyl-, C₁-C₂-haloalkyl- or C₁-C₄-alkoxy-substituted C₃-C₈-cycloalkyl in which optionally one methylene group is replaced by oxygen or sulphur or in each case optionally halogen-, C₁-C₄-alkyl-, C₁-C₄-alkoxy-, C₁-C₂-haloalkyl-,
30 C₁-C₂-haloalkoxy-, cyano- or nitro-substituted phenyl, pyridyl,

thienyl, thiazolyl, phenyl-C₁-C₄-alkyl, pyridyl-C₁-C₂-alkyl or thiazolyl-C₁-C₂-alkyl,

Q², Q³, Q⁴ independently of one another represent hydrogen or C₁-C₄-alkyl,

5

Q¹ and Q² together with the carbon atom to which they are attached represent optionally C₁-C₆-alkyl-, C₁-C₆-alkoxy- or C₁-C₂-haloalkyl-substituted C₃-C₇-cycloalkyl in which optionally one ring member is replaced by oxygen or sulphur.

10

3. Compounds of the formula (I) according to Claim 1 in which

W represents fluorine, chlorine, bromine, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₂-haloalkyl, C₁-C₂-haloalkoxy or cyano,

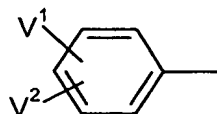
15

X represents hydrogen, fluorine, chlorine, bromine, C₁-C₄-alkyl or C₁-C₄-alkoxy,

Y represents hydrogen, fluorine, chlorine, bromine, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₂-haloalkyl, C₁-C₂-haloalkoxy, cyano or represents the group

20

25



V¹ represents hydrogen, fluorine, chlorine, bromine, C₁-C₆-alkyl, C₁-C₄-alkoxy, C₁-C₂-haloalkyl, C₁-C₂-haloalkoxy, nitro, cyano or represents

phenyl or phenoxy, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₂-haloalkyl, C₁-C₂-haloalkoxy, nitro or cyano,

5 V² represents hydrogen, fluorine, chlorine, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₂-haloalkyl or C₁-C₂-haloalkoxy,

10 V¹ and V² together and together with the carbon atoms to which they are attached represent an optionally fluorine- or methyl-substituted 5- or 6-membered cycle in which optionally one or two carbon atoms may be replaced by oxygen,

15 Z represents hydrogen, fluorine, chlorine, bromine, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₂-haloalkyl, C₁-C₂-haloalkoxy or cyano,

 G represents chlorine, bromine or nitro,

 m represents the number 0 or 1,

20 A represents hydrogen, represents in each case optionally fluorine-substituted C₁-C₈-alkyl or C₁-C₄-alkoxy-C₁-C₂-alkyl, represents in each case optionally fluorine-, chlorine-, methyl-, ethyl- or methoxy-substituted C₅-C₆-cycloalkyl or C₃-C₆-cycloalkyl-C₁-C₂-alkyl in which optionally one ring member is replaced by oxygen or sulphur or
25 in each case optionally fluorine-, chlorine-, bromine-, C₁-C₄-alkyl-, C₁-C₂-haloalkyl-, C₁-C₄-alkoxy- or C₁-C₂-haloalkoxy-substituted phenyl or benzyl,

30 B represents hydrogen or C₁-C₄-alkyl,

A, B and the carbon atom to which they are attached represent saturated C₅-C₇-cycloalkyl in which optionally one ring member is replaced by oxygen and which is optionally monosubstituted by C₁-C₄-alkyl, trifluoromethyl or C₁-C₄-alkoxy,

5

with the proviso that in this case Q¹ only represents hydrogen,

A and Q¹ together represent C₃-C₄-alkanediyl which is optionally mono- or disubstituted by methyl, ethyl, methoxy or ethoxy,

10

Q¹ represents hydrogen, C₁-C₆-alkyl, C₁-C₄-alkoxy-C₁-C₂-alkyl or optionally methyl- or methoxy-substituted C₃-C₆-cycloalkyl in which optionally one methylene group is replaced by oxygen, or in each case optionally fluorine-, chlorine-, bromine-, C₁-C₄-alkyl-, C₁-C₄-alkoxy-, trifluoromethyl- or trifluoromethoxy-substituted phenyl or benzyl,

15

Q², Q³, Q⁴ independently of one another represent hydrogen, methyl or ethyl,

Q¹ and Q² together with the carbon to which they are attached represent optionally C₁-C₄-alkyl- or C₁-C₄-alkoxy-substituted saturated C₅-C₆-cycloalkyl in which optionally one ring member is replaced by oxygen,

20

with the proviso that in this case A only represents hydrogen.

25

4. Compounds of the formula (I) according to Claim 1 in which

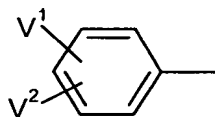
W represents chlorine, bromine, methyl, ethyl, propyl, methoxy, ethoxy, trifluoromethyl, difluoromethoxy, trifluoromethoxy or cyano,

30

X represents hydrogen, chlorine, bromine, methyl, ethyl, propyl, methoxy or ethoxy,

Y represents hydrogen, fluorine, chlorine, bromine, methyl, ethyl, n-propyl, i-butyl, CH(CH₃)-i-butyl, methoxy, ethoxy, trifluoromethyl, trifluoromethoxy, difluoromethoxy, cyano or represents the group

5



V¹ represents hydrogen, fluorine, chlorine, bromine, methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl, tert-butyl, methoxy, ethoxy, n-propoxy, isopropoxy, trifluoromethyl or trifluoromethoxy,

10

V² represents hydrogen, fluorine, chlorine, methyl, ethyl, n-propyl, isopropyl, methoxy, ethoxy or trifluoromethyl,

15

Z represents hydrogen, fluorine, chlorine, bromine, methyl, ethyl, propyl, methoxy, ethoxy, trifluoromethyl, trifluoromethoxy, difluoromethoxy or cyano,

G represents chlorine, bromine or nitro,

20

m represents the number 0 or 1,

A represents hydrogen, methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl, methoxymethyl or ethoxymethyl,

25

B represents hydrogen, methyl or ethyl,

A, B and the carbon atom to which they are attached represent saturated C₅-C₇-cycloalkyl in which optionally one ring member is replaced by

oxygen and which is optionally monosubstituted by methyl, ethyl, isopropyl, trifluoromethyl, methoxy, ethoxy, n-propoxy, n-butoxy or isobutoxy,

5 with the proviso that in this case Q¹, Q², Q³ and Q⁴ only represent hydrogen,

A and Q¹ together represent C₃-C₄-alkanediyl,

10 Q¹ represents hydrogen, methyl, ethyl, n-propyl, isopropyl, n-hexyl, cyclopropyl, cyclopentyl or cyclohexyl,

Q², Q³, Q⁴ independently of one another represent hydrogen, methyl or ethyl,

15 Q¹ and Q² together with the carbon to which they are attached represent optionally methyl-, ethyl-, methoxy-, ethoxy-, n-propoxy- or n-butoxy-substituted saturated C₅-C₆-cycloalkyl in which optionally one ring member is replaced by oxygen,

20 with the proviso that in this case A, B, Q³ and Q⁴ only represent hydrogen.

5. Compounds of the formula (I) according to Claim 1 in which

W represents methyl or chlorine,

25

Y represents phenyl which is optionally mono- or disubstituted by fluorine or chlorine, represents chlorine, bromine, methyl, ethyl, n-propyl, i-butyl, CH(CH₃)-i-butyl or trifluoromethyl,

30

Z represents hydrogen,

G represents chlorine,

m represents 0 or 1,

5 A represents hydrogen or methyl,

B represents hydrogen or methyl,

10 A, B and the carbon atom to which they are attached represent C₅-C₇-cycloalkyl, with the proviso that in this case Q¹ and Q² only represent hydrogen,

Q¹ represents hydrogen, methyl, ethyl, i-propyl or n-hexyl,

15 Q² represents hydrogen or methyl,

Q¹, Q² and the carbon atom to which they are attached represent C₅-C₆-cycloalkyl, with the proviso that in this case A and B only represent hydrogen,

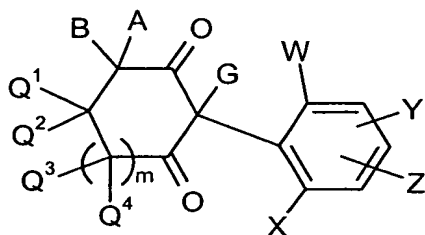
20

Q³ represents hydrogen,

Q⁴ represents hydrogen.

6. Process for preparing compounds of the formula (I) according to Claim 1, characterized in that, to obtain

A) compounds of the formulae (I-1) to (I-2)



$m = 0$ (I-1)

$m = 1$ (I-2)

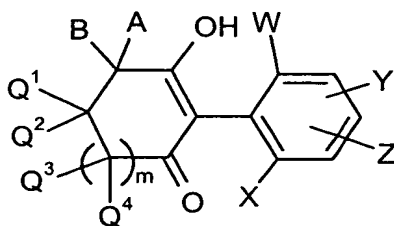
in which

A, B, Q¹, Q², Q³, Q⁴, W, X, Y and Z are as defined above

and

G represents halogen,

compounds of the formulae (II-1) to (II-2)



$m = 0$ (II-1)

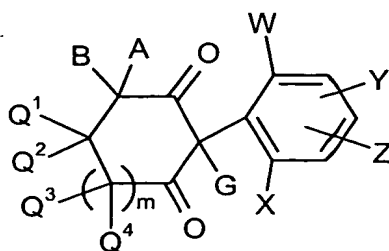
$m = 1$ (II-2)

in which

A, B, Q¹, Q², Q³, Q⁴, W, X, Y and Z are as defined above

are reacted with halogenating agents in the presence of a solvent and,
if appropriate, in the presence of a free-radical initiator and

5 B) compounds of the formulae (I-1) to (I-2)



$m = 0$ (I-1)

$m = 1$ (I-2)

10 in which

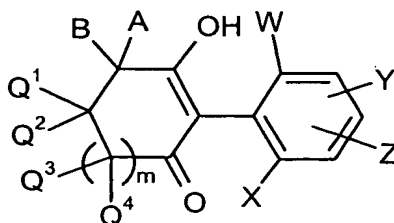
A, B, Q¹, Q², Q³, Q⁴, W, X, Y and Z are as defined above

and

15

G represents nitro,

compounds of the formulae (II-1) to (II-2)



$m = 0$ (II-1)

$m = 1$ (II-2)

20

in which

A, B, Q¹, Q², Q³, Q⁴, W, X, Y and Z are as defined above

are reacted with nitrating agents, such as, for example, fuming nitric acid in the presence of a solvent.

5

7. Compositions for controlling pests, unwanted vegetation and/or unwanted microorganisms, characterized in that they comprise at least one compound of the formula (I) according to Claim 1.

10

8. Method for controlling animal pests, unwanted vegetation and/or unwanted microorganisms, characterized in that compounds of the formula (I) according to Claim 1 are allowed to act on pests, unwanted vegetation, unwanted microorganisms and/or their habitat.

15

9. Use of compounds of the formula (I) according to Claim 1 for controlling animal pests, unwanted vegetation and/or unwanted microorganisms.

20

10. Process for preparing compositions for controlling pests, unwanted vegetation and/or unwanted microorganisms, characterized in that compounds of the formula (I) according to Claim 1 are mixed with extenders and/or surfactants.

25

11. Use of compounds of the formula (I) according to Claim 1 for preparing compositions for controlling pests, unwanted vegetation and/or unwanted microorganisms.